

HORTUS EUROPÆ AMERICANUS:

O R, A

Collection of 85 Curious TREES and SHRUBS,

The Produce of NORTH AMERICA;

ADAPTED TO

The CLIMATES and SOILS of GREAT-BRITAIN,
IRELAND, and most Parts of EUROPE, &c.

TOGETHER WITH

Their BLOSSOMS, FRUITS and SEEDS;

OBSERVATIONS on their CULTURE, GROWTH, CONSTITUTION and VIRTUES.

WITH

DIRECTIONS how to COLLECT, PACK UP, and SECURE them in their PASSAGE,

Adorn'd with 63 FIGURES on 17 COPPER-PLATES, large IMPERIAL Quarto.

By MARK CATESBY, F. R. S.



L O N D O N:

Printed for J. MILLAN, near Whitehall. M DCC LXVII. Price colour'd 1l. 11s. 6d.

1767

NOTES FROM A VAGABOND.

COLLECTION OF 85 PHOTOS OF THE EATING SPACES

OF THE PEOPLE OF KOREA AND CHINA.

THE CHINESE AND KOREAN CUISINES.

THE KOREAN AND CHINESE CUISINES.

THE CHINESE AND KOREAN CUISINES.

TO

H E N R Y S E Y M E R,

Of Handford, Dorsetshire, ESQUIRE,

The following T R E A T I S E,

Written upon that Branch of Natural Science in which he eminently excels,
And on those Arts of Cultivation which his own rural Improvements best illustrate and explain,

I S,

With the greatest Propriety, Gratitude, and Respect,

I N S C R I B E D,

By his most obliged and obedient Servant,

JOHN RYALL.

LONDON, May 2, 1763.

ДОЛГОЕ ВРЕМЯ ВОЛОСЫ БЫЛИ

ДЛЯ МАЛЫХ ДЕТЕЙ СЛОВОМ

ДЛЯ ВСЕХ ДРУЗЕЙ СЛОВОМ

P R E F A C E.

IT will easily be imagined that a forest of a thousand miles in length, extending twenty degrees in latitude from north to south (for such is the territory of the crown of Great Britain on the continent of America) must afford a plentiful variety of trees and shrubs, that may be usefully employed to enrich and adorn our woods by their valuable timber and delightful shade; or to embellish and perfume our gardens with the elegance of their appearance and the fragrancy of their odours; in both which respects they greatly excel our home productions of the like kind. But however obvious this may now be, very little regard was had thereto at our first settling in those countries; nor indeed was any considerable step taken towards introducing these strangers into England till about the year 1720, since which time, and through the laudable application of a few persons only, many kinds of American plants, and particularly of forest-trees and shrubs, have been procured and raised from thence; which, though hitherto principally in the possession of the opulent and curious, they, it is to be hoped, will for the benefit of their country be excited to encourage their propagation and increase, that both Faunus and Flora may be consulted, as well for the benefit of our woods, as for ornaments to our gardens.

The Mahogany is a remarkable instance how greatly beneficial some of the American trees may prove; and likewise serves to shew, that length of time and proper opportunities are requisite to discover their nature and uses; for this tree could not possibly have escaped the observation of the first Europeans that settled in Jamaica; and yet the excellence of its wood was not taken notice of till at least an hundred and fifty years afterwards. And the case must certainly be the same with many other trees, whose properties lie still concealed; and may probably so continue, unless by their becoming free denizens of our woods and gardens, their plenty may afford opportunities of discovering their uses and virtues; which in an infant country, little inclined to improvements, and depending on its mother country for all kinds of utensils, cannot be expected. By the concurrent endeavours of the philosopher and artisan, I question not but many of them will be found useful to purposes, of which at present we have not the least conception.

This

This whole tract of continent lying within the northern part of the temperate zone, produces few plants but what will stand the rigour of our winters in England; for it is remarkable, that notwithstanding the most southern part of the English colonies on the continent of America are twenty degrees more south than England, the cold is there no less severe than it is in England itself; and consequently their plants are so much the better adapted to the air of our more northern situation: and indeed, experience has sufficiently proved how well the English soil and climate agree with these plants; for though they are not equally hardy, and some (when small) require a little protection, yet there are other kinds which brave our winters as stoutly as if they were our own productions.

By a long acquaintance with the trees and shrubs of America, and a constant attention since for several years to their cultivation here, I have been enabled to make such observations on their constitution, growth, and culture, as may render the management of them easy to those who shall be desirous to enrich their country, and give pleasure to themselves, by planting and increasing these beautiful exotics; and I shall think myself very happy, if this little work may excite any to what in my opinion is evidently a public good.

Few people have opportunities of procuring these things from America; wherefore, lest I should seem to treat of what cannot be got at all, or with very great difficulty, it seems proper to mention, that Mr. GRAY at Fulham has for many years made it his business to raise and cultivate the plants of America (from whence he has annually fresh supplies) in order to furnish the Curious with what they want; and that through his industry and skill a greater variety of American forest-trees and shrubs may be seen in his gardens, than in any other place in England.

As those who are desirous and have it in their power to procure large quantities of seeds and plants from America, may be at a loss what instructions to send their correspondents abroad, I have been particular in giving an account where the several kinds of plants are to be found that are uncommon, and in directing how they are to be collected, packed up, and secured, so as to preserve them in good condition during their passage; which are matters of the utmost consequence, though less known even than their culture.

The whole number of trees and shrubs here treated of consist of eighty-five, sixty-three of which are graved, and their figures here exhibited; the remaining twenty-two are described, but not graved, which is thought altogether unnecessary, because their description alone gives a clear idea of them without any other assistance; which is not the case of those that are figured.

As this small tract is designed intirely for use, I have endeavoured to contrive it in the most intelligible and compendious manner I was able, both in regard to the style and also the figures of the plants here exhibited; judging it unnecessary to fill several pages with repeated directions for the management of every plant, when a few lines may suffice for the greater part of them: for as I have been particular in the culture of the first plant (page 1.) that may serve also as a direction for most of the rest, with some small variation; for in general all trees and shrubs that come from within or near the same latitude in these countries, require a management in raising them little different from one another.

As to the figures of the plants with all their parts, as leaves, flowers, fruit, &c. though they are comprised in little room, they are nevertheless represented in their natural size, which necessarily gives a more perfect idea than if they had been contracted to a smaller scale. I shall conclude with one observation, which of however little consequence is nevertheless remarkable, which is, that a small spot of land in America has, within less than half a century, furnished England with a greater variety of trees than has been procured from all the other parts of the world for more than a thousand years past.

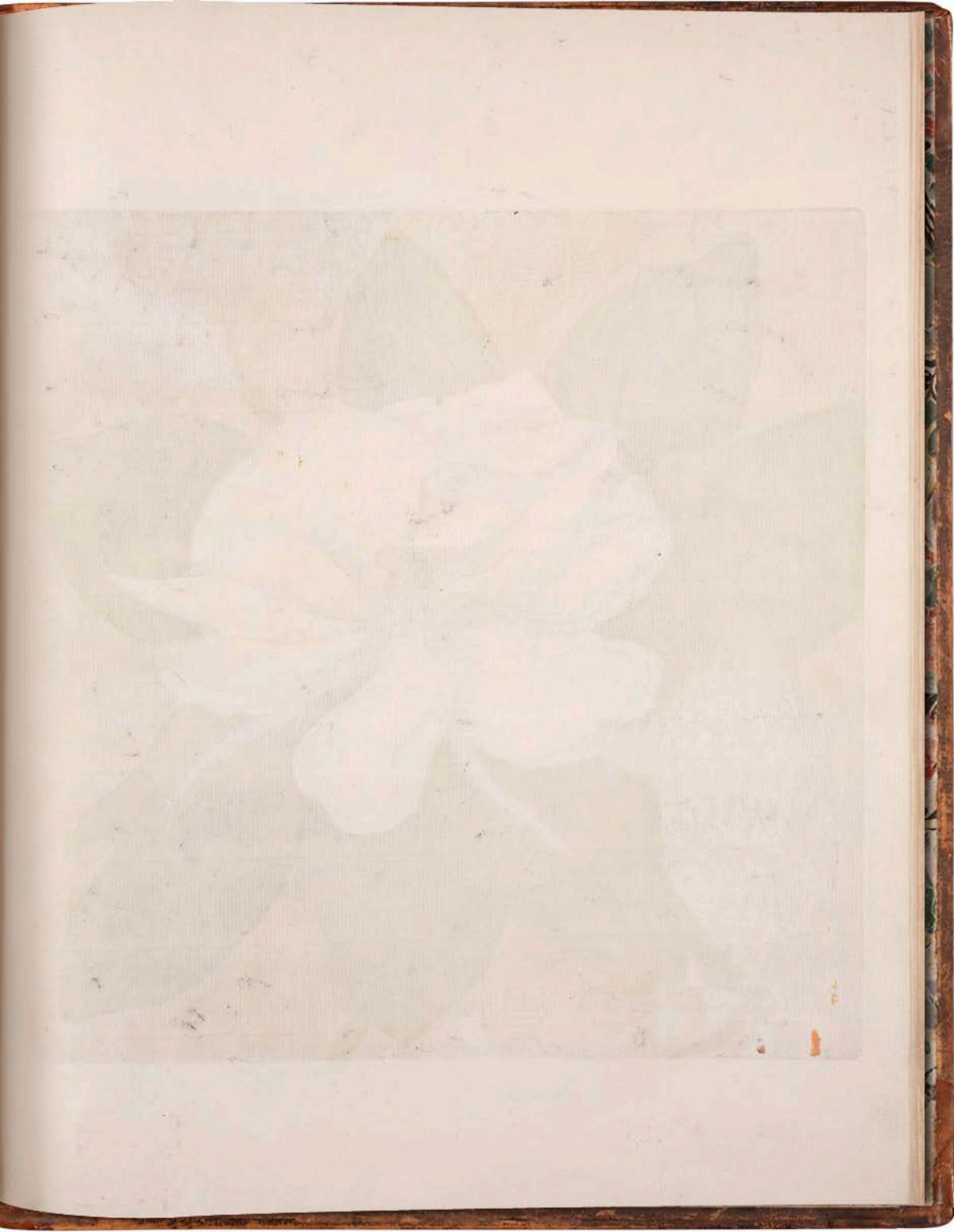
N. B. Those marked with an asterisk are not engraved.

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Magnolia grandiflora

Hortus Britanno-Americanus.

1. *Magnolia altissima, flore ingenti candido.*

The Laurel-tree of Carolina.

Of all the trees able to endure our climate, that have yet been introduced to England, there is none that can equal this magnificent ever-green. Its ample and fragrant blossoms, the curious structure and beauty of its purple cones and pendent scarlet seeds, successively adorn and perfume the woods from May to October; and justly intitle it to the pre-eminence amongst the varieties in the forests of America. These trees grow in the lower parts of Carolina, and particularly in such places as are unfrequented by cattle and hogs; which creatures are so fond of the young plants, that they crop off their heads as fast as they appear above ground; by which means they are now become almost extinct in many parts of the country, where they abounded before the introduction of cattle.

Towards procuring the seeds of this tree in good condition, the success depends in a great measure on their being kept in such a degree of heat and moisture as is requisite to preserve them in their long passage; for if they are put up too dry, their juices will remain inactive and make no effort towards vegetation; if they are kept too warm and moist, they will sprout in the box and perish; and too much moisture and cold rots them.

The following method I recommend from my own experience: The cones or seed-vessels should be plucked from the tree in the month of September, when the seeds manifest their beginning to ripen by bursting forth from the little cells wherein they are contained. After the cones have lain by for a little while, the seeds may be taken out and sent to England as soon as opportunity offers, being packed up in the manner here described.

Prepare a square box of the size of a bushel or less, at the bottom of which put a layer of light earth two inches deep, spread thereon a single layer of seeds, then again a layer of earth,

and so dispose your seeds and earth alternately, stratum super stratum, until the box be full; then nail down the lid and let it be placed between decks. As soon as you get the box from the ship after it comes to England, separate the seeds from the earth through a wire sieve, spread them out and let them remain so a day or two till they are dry; then put them in a basin of lukewarm water; by which means the sound seeds will be proved by their sinking to the bottom, and the bad ones by their floating. In whatever month they arrive, sow them immediately in the following manner: Procure earthen pans, or shallow tubs filled with earth, in which sow the seeds thick, if your plenty of them will admit of it, even less than an inch from one another; place them in a hot bed moderately warm, and keep them moist. In about two months they may be expected to appear above ground, though that is uncertain; for in proportion to their warm or cold situation in the ship, their growing will be forwarded or retarded, and they will come up sooner or later. After they are come up, let them have the sun but sparingly, and that principally in the morning, with frequent waterings; and as they increase in growth, harden them by degrees against the approach of winter, in which season, when the weather proves moderate, the glasses may be taken off; but as they are impatient of cold while they are young, and their top-shoots are liable to be nipped, care must be taken that they be not too much exposed, for the loss of their top-shoot is a deformity they never out-grow, though they may survive it. This caution of preserving their leading buds is continually to be observed till the bigness of the tree makes it less practicable: in March, or the beginning of April, transplant them from their genial beds into deeper pots, five or six in a pot, or in proportion to the size of the pot; this causes less trouble, and retards not their growth more than if one alone was in a pot, till they become of fit size to require a pot for every one.

Though these plants while young are very tender and require attendance, being arrived to the height of two feet they will endure our severest winters; of which we had sufficient proof in the year 1740, when ten or a dozen of these small trees growing in the open ground without any protection were very little injured by that excessive cold winter; whilst at the same time and place several hundreds of the same kind, planted in single pots, which were covered with reeds and double matted, perished every one, notwithstanding this seeming security.

2. *Magnolia flore albo, folio majore, acuminato haud albicante.*

The Magnolia of Pennsylvania.

This tree rises to the height of an hundred feet; its leaves are shaped like those of the lilac, but larger, and fall at the approach of winter: it produces early in the spring white rosaceous flowers, which are succeeded by purple conic seed-vessels, thick set on the outside with little protuberances, every one of which incloses a scarlet seed the size of a french-bean.

These seeds, when they drop from their cells, fall not to the ground, but hang pendent by small white threads two or three inches below the cone. The feminal parts of this tree have so near an affinity and resemblance to the *magnolia altissima*, and the other kinds of this genus, that, excepting the difference in their size, the same description may almost serve for all the four species. The wood of this tree has a fine grain, is tough, and of an orange colour, and is used by the American Indians for bowls and other utensils: they grow on the north side of Susquahanna river, in the province of Pennsylvania, and also in the woods of New York: which northern situation adapts them to our climate more than the other kinds; and from the vigorous appearance of two or three very young plants now growing at Fulham, and which I believe are the only ones growing in England, there is good reason to hope this majestic tree may easily be naturalized to our northern parts.

3. *Magnolia Lauri folio, subtus albicante.*

The sweet flowering or rose Bay.

These trees are usually of a small size, seldom growing to the height of twenty feet, and their trunks rarely above eight or ten inches thick; the leaves are shaped like those of the common bay, of a shining green, and white on the under side: they blossom in the month of May, producing a succession of fragrant white flowers, which perfume the woods all the summer long, and are succeeded by pendulous scarlet seeds discharged from purple cones in like manner as the rest of the tribe.

These trees grow generally in a low wet soil, but if removed to high dry ground will become more regular and handsome, and more prolific in flowers and fruit: they usually shed their leaves in winter, unless the weather be very moderate. They are natives of Virginia and a great part of the northern continent of America. The seeds require the like management as those of the *magnolia altissima*, but are raised with more difficulty.

4. 4. *Magnolia amplissima, flore albo, fructu coccineo.*

The Umbrella-tree.

The height of this tree is from sixteen to twenty feet, having a slender trunk of about five or six inches diameter; the leaves, which are thirty inches long and five in width, grow in horizontal circles of about ten together, somewhat resembling an umbrella; in the center of which rises a large greenish-white flower, composed of ten petals. The structure of the ovary and seed-vessel is like those of the other species. They grow in the shady woods of Carolina, their ample and tender leaves not enduring to be ruffled in an open exposure. The seeds of this most elegant plant require the like management as those of the *magnolia altissima*; but as it is a tender plant, it is raised with more difficulty, and I fear will not abide our winters without some protection. Very few of these trees are found in Virginia; York River seems to be their most northern boundary in which they are known to grow; in Carolina they are in greater plenty, particularly in the path leading from Mr. SKENE's house to his Savanna.

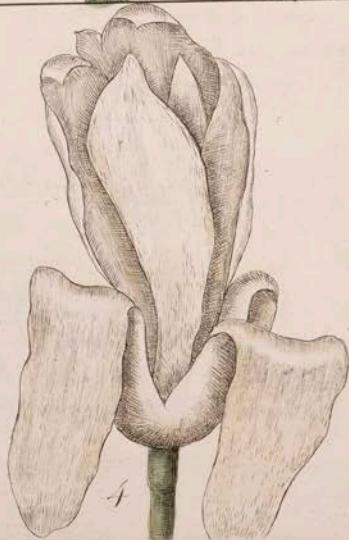
The figures of all the plants here exhibited are done in their natural size, except this alone; which, though well deserving that advantage, could not be here effected, wherefore there was a necessity of reducing it to this small scale, the circle of leaves at its full growth measuring nine feet. The flower is exhibited by itself.

Concerning O A K S.

The soil and climate of England being so peculiarly adapted to the growth of the oak, it may be reasonably expected that the various species of this tree which America abounds with, should also agree and prosper with us, at least as well as many other trees of those countries; but experience shews otherwise, unless acorns are brought from the northward, as Pennsylvania, New York, &c. for they are frequently killed in the ground in winter that come from South Carolina, a country many degrees colder than England; and are otherwise not well adapted to our climate, most of them being reared with some difficulty; wherefore it seems more feasible to gratify and assist the curious in getting together a collection of the various species from the northward, to increase them so much as to become naturalized to our woods.

The planters of America multiply the species of their oaks to twice the number they really have, by giving them different names according to the properties of their wood and the uses they

Magnolia glauca



Magnolia tripetala



they employ it in; a method by no means proper to make them sufficiently distinguished from one another, as the wood of different oaks is commonly much alike and fit for the same purposes, though perhaps the structure of the grain may receive some alteration by the soil it grew in.

But what has most contributed to multiply the species of oaks is, the great variety of different-shaped leaves some of these trees are apt to sport into; which, that they should be all produced from one and the same tree, seems incredible to those who have only seen the dried specimens sent from America.

The black oak is one instance of it, whose leaves are sometimes a foot broad, whilst others on the same tree are not three inches broad, and of very different shapes. Notwithstanding this great variety of appearances of American oaks, above the number of eleven or twelve species were not apparent to me, till by the indefatigable searches of Dr. MITCHEL, four or five more by him have been discovered in the remote and unfrequented parts of our colonies. Why may not the variety of leaves in this and some other trees, as well as some kinds of herbaceous plants, proceed from the like cause, of impregnating other trees of the same genus, which by deviating from the uniform course of nature produce in like manner a spurious breed?

Acorns of all kinds will not endure to be kept long out of the ground, wherefore a quick passage conduces not a little to their preservation. So soon as they are gathered let them be sent in a box of sandy moist earth, and sown so soon as they arrive.

N. B. Though there is a general resemblance in the shape, as well as size, of acorns of the same species in most oak, yet their distinction is not to be determined thereby, because some acorns sport into the various shapes of other species, as has been before observed of their leaves.

5. *Quercus folio non ferrato, in summitate quasi triangulo.*

The Water Oak.

This tree grows no where but in low waterish lands: the timber is not durable, and therefore of little use, except for fencing in of fields. Its acorns in shape are not unlike the olive; they are small and bitter, and even the hogs refuse them, if any other food is to be found. In mild winters it retains the greatest part of its leaves.

6. *Quercus humilior Salicis folio breviore.*

The Highland Willow Oak.

This is usually a small tree, having a dark-coloured bark with leaves of a pale green, shaped like those of the willow oak, but shorter and not so pointed: it grows on dry poor land, producing but few acorns, and those small.

7. *Quercus alba Virginiana.*

The White Oak.

This the nearest resembles our common English oak in the shape of the leaves and manner of growing; the bark is white, and the grain of the wood fine; for which and its durableness it is much esteemed. It grows on all kinds of land, but mostly on high barren ground amongst pine-trees. There is also another kind of white oak, which in Virginia is called Scaly White Oak, whose leaves are like this, but the bark is white and scaly: its wood is of great use in building; and it grows on rich lands both high and low.

8. *Quercus Carolinensis, virentibus venis, muricata.*

The White Oak with pointed notches.

The leaves of this oak are notched and have sharp points; the bark and wood is white, but has not so close a grain as the preceding. Dr. PLUNKET has figured a leaf shaped like this, by the name of *Quercus Virginiana rubris venis muricata*; this has no red veins. The figure of the white oak and that of the white oak with pointed notches are here expressed by one leaf.

9. *Quercus Esculi divisura, foliis amplioribus aculeatis.*

The Red Oak.

The leaves of this oak retain no certain form, but sport into various shapes more than other oaks do: its bark is dark-coloured, very thick and strong, and for tanning preferable to that of any other kind of oak. The grain is coarse, the wood spongy and not durable; however it serves for pipe and barrel staves, clap-boards, and fence rails. They usually grow large and lofty.



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18. *Acacia farnesiana* (L.) Willd.





10. *Quercus, an potius Ilex Marilandica, folio longo angusto salicis.*

The Willow Oak.

This oak is always found in low wet lands: the wood is soft and coarse-grained; the leaves are long, narrow, and smooth-edged. They drop them in Virginia, but in Carolina, where the winters are somewhat milder, they usually retain them.

11. *Quercus sempervivens, foliis oblongis non sinuatis.*

The Live Oak.

The usual height of this oak is about forty feet: its wood is heavier and more durable than that of any other oak in America. Though it grows to a large size, its trunk and limbs are naturally crooked, and serve excellently for timbers, knees, &c. for shipping: they grow usually in salt marshes, and only in the lower parts of the country; but if removed to a dry soil, become very straight and handsome trees; and in Carolina, their native country, are quick growers. The acorns are the sweetest of all others, and are in great esteem with the Indians, who store them up to thicken their venison broth: they also draw from them an excellent sweet oil, which they use in cookery, &c.

12. *Quercus Castaneæ foliis, procera arbor Virginiana.*

The Chestnut Oak.

This oak grows only in low and very good land, and is the tallest and largest of all the oaks in these parts of the world. The bark is white and scaly; the grain of the wood not fine, though it yields the largest and fairest plank of any other oak; the leaves are large, indented round the edges somewhat like those of the chestnut. The acorns are larger than of any other oak.

13. *Quercus (forte) Marilandica, folio trifido ad saffras accedente.*

The Black Oak.

This oak usually grows on the poorest land, and is but a small tree: the colour of its bark is black; the grain is coarse, but durable under water, and is sometimes made use of for house-work. It bears good mast for hogs; and some of this kind produce leaves at least ten inches wide.

14. *Cupressus Americana.*

The Cypress of America.

The cypress is (except the tulip-tree) the tallest and largest of all the trees this part of the world produces; near the ground some of them measure thirty feet in circumference: they are propagated by seeds only; which are inclosed in a round seed-vessel in the manner of the European cypresses, and contain a balsamic consistence of a fragrant smell. The timber of this tree is excellent, and particularly for covering houses, being light, of a free grain, and resisting the injuries of the weather better than any other made use of for this purpose. It is an aquatic, and usually grows from one to six feet deep in water; which secure situation and the sweetnes of the seeds invite great numbers of different birds to breed and feed in its lofty branches. No American tree seems to affect the soil and climate of England more than this: its cones being replete with turpentine, the seeds are so well preserved in their passage, that they rarely fail of growing, though sent in any manner.

15. *Liquid-ambari Arbor, seu Styraciflua, aceris folio, fructu tribuloide,*
i. e. Pericarpio orbiculari ex quam plurimis apicibus coagmentato, semen recondens.

The Sweet Gum-tree.

The trunk of this tree is commonly two feet diameter, straight and free from branches to the height of fifteen or twenty feet; from which the branches spread, and rise in a conic form to the height of forty feet and upward from the ground. The leaves are five-pointed, being divided into so many deep sections, and are set on slender pedicles: in February, before

leaves

Liquidambar styraciflua



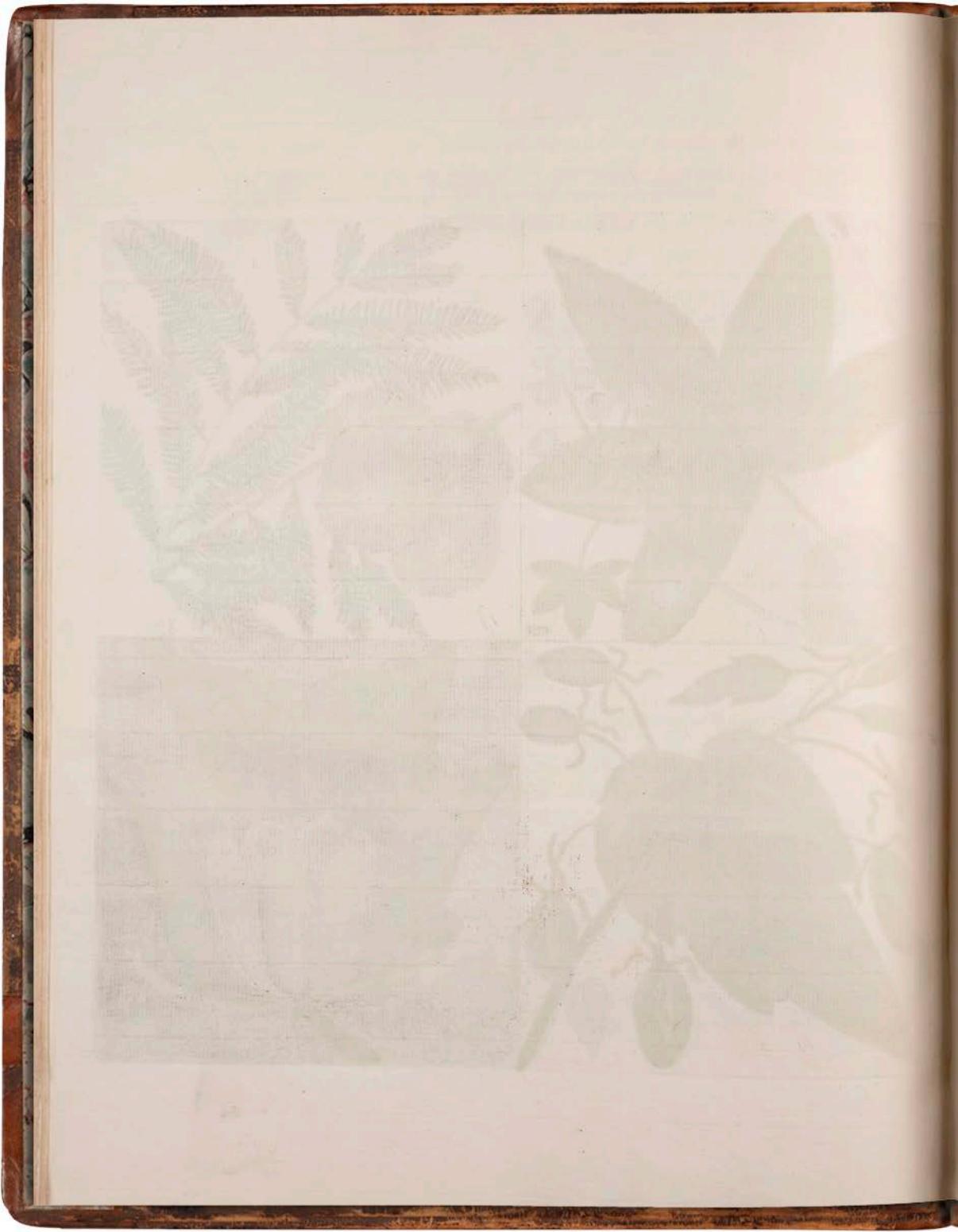
Cupressus disticha



Nipa aquatica



Liriodendron tulipifera



leaves are formed, the blossoms begin to break forth from the tops of the branches into spikes of yellowish, red, pappous, globular flowers; which, when the apices are blown off by the wind, swell gradually, retaining their round form to the full bigness of their seed-vessels, which are thick set with hollow pointed protuberances, which being split open, each cell discharges a shining black seed.

The wood is good timber, and used in wainscotting, &c. its grain is fine, beautifully variegated, and very fit for curious works in joinery; but when wrought too green, is apt to shrink and fly from its joints; so that the planks require some years seasoning. The regular form and beauty of this tree deserves the regard of the Curious, as none of the American trees affect more our soil and climate: from between the wood and the bark there issues a fragrant gum, which trickles from the wounded tree, and by the heat of the sun congeals into transparent resinous drops; which the Indians chew, esteeming it a preservative of the teeth: the bark is also of singular use to them for covering their houses. A tree stripped of its bark will in a few days yield an hat-full of its odoriferous gum. In a warm aspect it will stand our severest frosts in the open ground: the hardiness of this tree, with its beauty and regular form, recommends it as extremely fit for avenues.

They are increased by laying down their branches, and are as readily raised from their seeds: the vessels containing the seeds should be gathered a little before they open, and sown with the seeds in them; or sow them in a box of moist mould, in which let them be brought, and they will come up well in a virgin soil without any assistance.

16. *Arbor Tulipifera Virginiana, tripartito aceris folio, media lacinia velut abscissa.*

The Tulip-tree.

This tree grows to a large size, being sometimes thirty feet in circumference, and of a vast height: in Virginia it is called a Poplar, from the similitude of the grain of the wood to that of our common poplar. It is used in wainscot shingles to cover houses, planks, mill-work, &c. being very lasting under ground. The flowers have always been compared to tulips, from which resemblance it takes its name; though in reality they are more like the Fritillaria. The cone it bears is composed of single-winged seeds; which, when ripe, fall from their placenta, and are dispersed far and near by the winds: so that although their cones are to be plucked before they are ripe, they should be taken at the critical time of their seeds beginning to drop,

otherwise they may by a sudden gust of wind be all blown off and lost. Though few trees in America are more prolific of seeds than these, yet the seeds of many of them are so apt to prove abortive, that a large quantity collected from different trees will admit of a better chance for raising a number of them: put them up in a box of sand, and stow them in a dry place; for moisture in their passage is apt to rot them. Sow them in pans in a hot bed, in which keep them till the winter is over: yet I have known them come up very well in a good virgin soil without art; it is best therefore to try both ways with this seed, and all others from our northern colonies; but those that come most northward are best for our climate.

17. *Nux Juglans nigra Virginienis.*

The Black Walnut-tree.

These trees are rarely seen in the low and flat parts of the country, nor ever but on good land, and commonly near the sources of rivers: they grow to a vast size and in great plenty throughout the northern continent of America, particularly in the upper parts of Virginia and Carolina. The leaves are much narrower and sharper-pointed than those of our walnuts, and not so smooth; the nuts are globular, usually twice as big as the European kind, and the inner shell so very thick and hard, that great force is required with a hammer to break it; the outer shell is very thick, and rough on the outside: the kernels are very oily and rank-tasted, and notwithstanding they lose much of their rankness when they have been laid by some months, they are after all more agreeable to the palates of Indians than of Europeans. The great quantity of oil these nuts yield makes them highly esteemed amongst the Indians for their usefulness in cookery. These, as well as all other nuts and acorns, require to be put into the ground in a shorter time after their being gathered, than most other seeds; so that the quicker their passage, the more likely is their chance for growing.

18. *Nux Juglans alba.*

The White Walnut-tree.

This tree is much smaller than the black walnut, nor is it so tall or so straight in its trunk; the leaves are also of a paler green, and generally longer than those of the black walnut-tree. The bark is white; the wood white, soft, coarse-grained, and not durable: the nut is somewhat oval and very long; and some time after it is gathered has many parallel, rugged furrows running from end to end. They will sometimes lay two years in the ground before they sprout; they are rank-tasted, and food only for squirrels and other wild animals.

19. *Arbor in aqua nascens, foliis latis acuminatis & dentatis, fructu eleagni majore.*

The Water Tupelo.

This tree has usually a large trunk, especially near the ground, and grows very tall: the leaves are broad and irregularly notched or indented; from the sides of the branches shoot forth its flowers on foot-stalks three inches long, consisting of several small narrow greenish petals on the top of an oval body (which is the rudiment of the fruit) at the bottom of which its perianthium divides into four. The fruit when full grown is in size, shape, and colour like a small Spanish olive, containing one hard channelled stone more pointed at one end. There is somewhat singular and remarkable in the vegetation of this stone; for when the young plant is ready to burst from its cell, nature follows not her usual method of discharging the kernel by splitting the stone in two, but the germin pushes out a little piece of the flat side of the shell, and through the hole so made the infant plant expands, and shoots a tap-root directly downwards. The grain of the wood is white, soft, and spongy; the roots are much more so, approaching nearly to the consistence of cork, and are used in Carolina for the same purposes as cork, to stop gourds and bottles. These trees always grow in wet places, and usually in the shallow parts of rivers. The seeds are very apt to grow, if planted before May; after they are come up, water them often, by omitting which they are as apt to miscarry: the succeeding summer the length of their tap-roots enables them to find moisture enough without the trouble of giving them water, except the weather proves excessive dry. This stately and singular tree deserves well to be propagated, not only for its uncommon appearance, but as it may probably have many useful properties, besides what are already conspicuous; particularly that of growing in the water, there being very few trees that will endure to live so deep in that element.

20. *Nux Juglans alba Virginienis.*

The Hiccor-tree.

This is usually a tall tree, and often grows to a large bulk, the body being from two to three feet diameter: the leaves are serrated, and narrower and sharper-pointed than those of our walnut. In October, at which time the nuts are ripe, the outer shell opens and divides in quarters, disclosing the nut, the shell of which is thick and not easy to break but with a

hammer:

hammer: the kernel is sweet and well-tasted, from which the Indians draw a wholesome oil; they also store them up for their winter provision; and the hogs, as well as many wild animals, receive great benefit from them. The wood is coarse-grained, yet of much use for many things belonging to agriculture. Of the saplings or young trees are made the best hoops for tobacco, rice, and tar-barrels; and for the fire, no wood in the northern parts of America is in so much request: its strength and toughness render it likewise in great repute for walking-sticks.

21. *Nux Juglans alba Carolinensis, minimo putamine levi.*

The Pig-nut.

The branches of this tree spread more, are smaller, and the leaves not so broad as those of the hickory; nor is the bark so wrinkled: the nuts are not above one fourth so big as those of the hickory, and have both the inner and outer shell so thin that they may easily be broke with one's fingers; the kernels are sweet, but covered with a very bitter skin, which makes them not eatable, except by squirrels and other wild creatures that can separate this bitter film better than human hands are capable of doing.

22. *Castanea pumila Virginiana, fructu racemato parvo in singulis capsulis echinatis unico.*

The Chinkapin.

This is a shrub that seldom grows higher than sixteen feet, and usually not above eight or ten; the body is commonly eight or ten inches thick and irregular; the bark rough; the leaves are serrated, and grow alternately of a dark green, their backsides being of a greenish-white: at the joints of the leaves shoot forth long spikes of whitish flowers, like those of the common chestnut, which are succeeded by nuts of a conic shape, and the size of a hazel-nut; the shell which incloses the kernel is of the colour and consistence of that of a chestnut, inclosed in a prickly burr; usually five or six hang in a cluster: they are ripe in September. These nuts are sweeter than the European chestnut, and of great use to the Indians, who lay them up for their winter's provision. When sent from America they frequently disappoint our expectations, and will not come up; for which two reasons may be assigned; the first is, that they are very apt to have maggots in them, which devour the kernels, and make them good for nothing; and the second, that being kept too long out of the ground, they lose their germinating power

by





by the length of their passage: if therefore some of them be put up in moist earth, and others in dry sand, a better chance may be expected than when they are all sent together packed up in the same manner; for each of these ways may succeed best at different times, though perhaps that can no more be accounted for in these than in many other seeds, which this method has proved very useful to.

All these different kinds of nuts may be sent in cases, their interstices being filled up with light dry earth or sand.

23. *Cornus Mas Virginiana, flosculis in corymbo digestis perianthio titrapetalo albo radiatim cinctis.*

The Dogwood-tree.

This is a small tree, the trunk being seldom more than eight or ten inches thick: the leaves resemble those of our common dogwood, but are fairer and larger, standing opposite to each other on foot-stalks of above a foot long; from among which branch forth many flowers in the following remarkable manner: In the beginning of March the blossoms break forth, and though perfectly formed, and wide open, are not so wide as a six-pence, but they increase gradually to the breadth of a man's hand, being not at their full bigness till about six weeks after their first appearance: each flower consists of four greenish-white leaves, every leaf having a deep indention at its end. From the bottom of the flower rises a tuft of yellow stamens; every one of which opens on the top into four small leaves or petals. The wood is white, has a close grain, and very hard, like that of box. The flowers are succeeded by clusters of berries from two to six in a cluster, closely joined and set on foot-stalks an inch long: these berries are red, of an oval form, and of the size of large haws, containing a hard stone. As the flowers are a great ornament to the woods in Summer, so are the berries in Winter; for they usually remain in full beauty on the trees till the approach of Spring. These trees bear the severest weather in England, without suffering any injury therefrom: they produce here plenty of suckers, by which they may be as plentifully increased. I have not heard of any flower or fruit of them produced in England.

24. *Amelanchior Virginiana, lauro cerasi folio.*

The Fringe-tree.

On the banks of rivulets and running streams this shrub is most frequently found: it grows from six to ten feet high, usually with a crooked, irregular, small stem. Its leaves are of a light green, and shaped like those of the orange: in May it produces bunches of white flowers, hanging on branched foot-stalks of half an inch long; each flower has four narrow thin petals about two inches long; to these succeed round dark-blue berries of the size of a small olive: the berries being succulent are often rotted in their passage, and lose their vegetative faculty; but they will increase by laying down their branches. It is a very hardy plant, and makes an agreeable appearance, especially while in blossom.

25. *Agrifolium Carolinense, foliis dentatis baccis rubris.*

The Dahoos Holly.

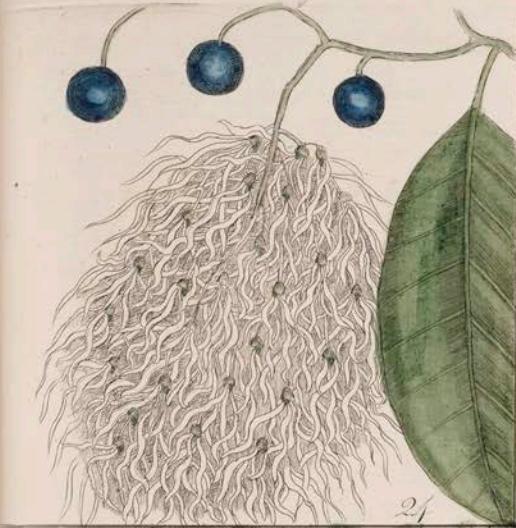
This Holly grows erect sixteen or twenty feet high; the branches shooting straighter and are of quicker growth than the common kind: the leaves are longer, of a brighter green, and more pliant; not prickly, but serrated only: the berries are red, growing in large thick clusters. This plant is not common in Carolina; it grows particularly at Colonel BULL's plantation on Ashley river, in a bog much frequented by alligators. The berries, when sown, require as much time before they appear above ground, as the common holly: their branches being laid, will also take root. They are somewhat tender, and require a little protection in rigid winters.

26. *Cassena vera Floridanorum, arbuscula baccifera Alaterni facie, foliis alternatim sitis, tetrapyrene.*

The Yapon.

This shrub usually rises from the ground with several stems to the height of twelve feet, shooting into many upright, slender, stiff branches covered with a whitish, smooth bark, and set alternately with small ever-green serrated leaves, resembling those of the Alaternus: its flowers

Chionanthus virginiana

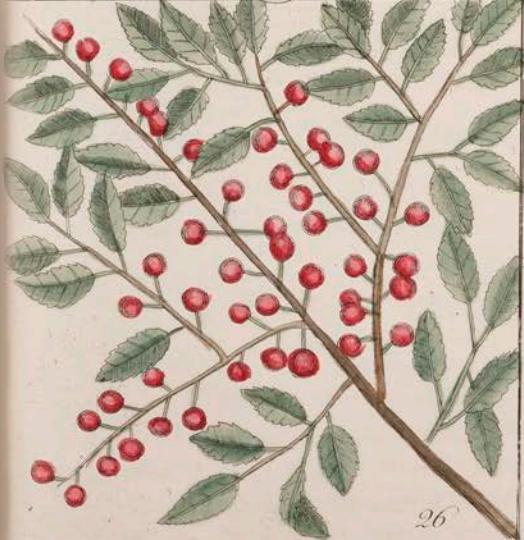


24

Cornus florida



25



26



25

Ilex

Ilex



flowers are small and white, and grow promiscuously amongst the leaves; and are succeeded by small spherical berries on short foot-stalks: these berries turn red in October, and remain so all the winter; whereby, with the green leaves and white bark, they produce an elegant appearance. But the esteem the American Indians have for this shrub, from the great use they make of it, renders it most worthy notice: they say its virtues have been known amongst them from the earliest times, and they have long used it in the same manner they do at present; they prepare the leaves for keeping by drying, or rather parching them in a pottage-pot over a slow fire; and a strong decoction of the leaves thus cured is their beloved liquor, of which they drink large quantities, both for health and pleasure, without sugar or other mixture; they drink it down and disgorge it with ease, repeating it very often, and swallowing many quarts: they say it restores lost appetite, strengthens the stomach, and confirms their health, giving them agility, and courage in war.

It grows chiefly in the maritime parts of the country, but not further north than the capes of Virginia. The Indians on the sea-coasts supply those of the mountains therewith, and carry on a considerable trade with it in Florida; just as the Spaniards do with their South-Sea tea from Paraguay to Buenos Ayres. Now Florida being in the same latitude north, as Paraguay is south, and no apparent difference being found on comparing the leaves of these two plants together, it is not improbable they may be both the same.

In South Carolina it is called Caffena, in Virginia and North Carolina it is known by the name of Yapon; in the latter of which places it is as much in use amongst the White People as among the Indians; and especially among those who inhabit the sea-coasts.

This plant is raised from its seeds, which lay two years in the ground before it appears: it grows plentifully on many of the sand-banks on the sea-shore of Carolina.

27. *Arbor in aqua nascens, foliis latis acuminatis & non dentatis, fructu eleagni minore.*

The Tupelo-tree.

This tree usually grows large and spreading, with an erect trunk and regular head: the leaves are shaped like those of a bay-tree. In Autumn its branches are thick set with oval, black berries on foot-stalks; each berry having an hard channelled flattish stone, which contains a kernel of a very bitter taste; yet are they food for many wild animals. The grain of the wood is curled and very tough, and therefore proper for naves of cart-wheels, and other country uſes.

uses. They grow usually in moist places in Virginia and Carolina; in the first of which countries they are called Black Gum-trees.

The berries lay in the ground two and sometimes three years before they sprout.

28. *Laurus Carolinensis, foliis acuminatis, baccis cæruleis, pediculis longis rubris insidentibus.*

The Red Bay.

The leaves of this tree are in shape like those of the common bay, and of an aromatic scent: the berries when ripe are blue, growing two and sometimes three together, on foot-stalks two or three inches long, of a red colour, as is the calix or cup of the fruit; which is indented about the edges. These trees are not very common in Virginia, except in some places near the sea; in Carolina they are every where seen, particularly in low swampy lands: in general they arrive but to the size of small trees and shrubs; though in some islands, and particular places near the sea, they grow to large and straight-bodied trees. The wood is fine-grained, and of excellent use for cabinets, &c. I have seen some of this wood that has resembled watered sattin, and whose grain has exceeded in beauty the grain of most woods I ever saw. This is a green-house plant, it being incapable of enduring the cold of England.

29. *Ligustrum Lauri folio, fructu violaceo.*

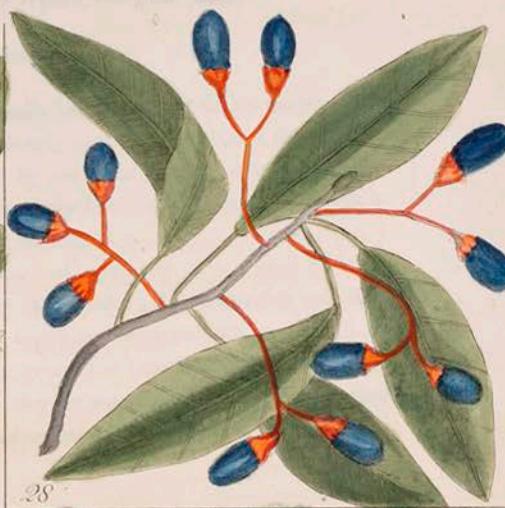
The Purple-berried Bay.

This tree grows usually sixteen feet high; the trunk is from six to eight inches diameter: the leaves are very smooth, and of a lighter green than the common bay-tree; but in their manner of growing resemble the leaves of that tree. In March, spikes shoot forth from between the leaves two or three inches in length, producing tetrapetalous, very small, white flowers that grow opposite to each other on foot-stalks half an inch long: the berries are globular, about the size of a very large pea, and covered with a thin purple-coloured skin, inclosing a kernel, which divides in the middle. I never saw these trees growing but near the little town of Dorchester on Ashley river. They may be increased by sowing their berries, and also by laying, though they are somewhat tender, and will not endure the open air without being planted in a well-sheltered and warm aspect.

Laurus Sapoefras



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Flowers white, in whorls above the leaves, and hanging in the leaf axils,
petals 5, stamens 10, Ovary 2-celled, Ovules 2 in each cell, style
slender, 2-lobed at the apex, found in



30. *Cornus Mas odorato, folio trifido margine plano.*

The Sassafras-tree.

This is generally a small tree; the trunk being usually less than a foot thick: the leaves are divided into three lobes by very deep incisures. In March come forth bunches of small yellow flowers with five petals each; which are succeeded by berries, in size and shape not unlike those of a bay-tree, hanging on red foot-stalks, with a calix like that of an acorn, which calix is also red: the berries are at first green, but when ripe, blue.

This tree grows in moist parts of North America, and commonly on very good land: its medicinal virtue is very well known as a sweetener of the blood; I shall therefore only add, that in Virginia a strong decoction of the root has sometimes been given with good success for an intermitting fever. It will endure our climate in a warm situation. The berries being somewhat succulent should be laid out to dry before they are put up, for fear of rotting in their passage, which should be short, for they will not endure being kept long out of the ground.

31. *Smilax levis lauri folio, baccis nigris.*

The Bay-leaved Smilax with black berries.

This plant is usually found in moist places: it sends forth from its root many green stems, whose branches overspread whatsoever stands near it to a very considerable distance; and it frequently climbs above sixteen feet in height; growing so very thick, that in Summer it makes an impenetrable shade, and in Winter a warm shelter for cattle. The leaves are of the colour of the *laurus cerasifus*, or common laurel, but in shape more like the bay, without any visible veins, the middle rib only excepted.

The flowers are small and whitish; the fruit grows in round clusters, and is a black berry, containing one single hard seed which is ripe in October, and is food for many sorts of birds.

32. *Smilax Brioniae nigrae foliis caule spinoso, baccis nigris.*

The Smilax with briony leaves.

This plant shoots forth with many pliant thorny stems; which, when at full bigness, are as big as a walking-cane, and jointed; and rises to the height usually of twenty feet, climbing upon and spreading over the adjacent trees and shrubs by the assistance of its tendrils. In Autumn it produces clusters of black round berries, hanging pendent to a foot-stalk about three inches long; each berry containing a very hard roundish seed. The roots of this plant are tuberous, divided by many knots and joints; and when first dug out of the ground are soft and juicy, but harden in the air to the consistence of wood. Of these roots the inhabitants of Carolina make a diet-drink, attributing great virtues to it in cleansing the blood, &c. They likewise in the Spring boil the tender shoots, and eat them prepared like asparagus. It is called there China-root.

33. *Smilax non spinosa, humilis baccis rubris.*

The Smilax with red berries.

These plants are always supported by trees and shrubs, on which they creep, and clasp with their tendrils. The leaves are long and narrow at both ends; they are thick, stiff, and shining, with a single rib in the middle, and are set alternately at wide distances: at the ends of the smaller branches are produced hexapetalous greenish-white flowers, which grow in umbelliferous tufts, and are succeeded by globular mucilaginous red berries, each berry containing a very hard roundish stone. These plants with their glittering scarlet fruit, and by retaining their green leaves, make an elegant appearance all the winter; at which time the berries serve as food to thrushes and other birds, and the whole plant as a warm shelter for them in that cold season: they usually grow in bogs and watry places in Virginia and Carolina. I never knew them raised from their seeds, which being exceeding hard, require to be sown in moist earth.



Amorpha fruticosa



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34. *Barba Jovis Caroliniana frutescens acaciae foliis.*

Jove's Beard, vulgo Indigo-tree.

The main stem of this plant seldom grows bigger than a man's wrist; from which shoot forth long straggling branches to the height of about twelve or sixteen feet, set with long spikes of papilionaceous purple flowers, which are succeeded by short pods, containing in every one a single seed or little bean.

They may be propagated by their seeds, as well as by laying down their branches; and will stand our sharpest winters in a warm aspect.

35. *Chamerhododendros lauri folio semper virens, floribus bullatis corymbosis.*

The Rock Rose of Pennsylvania.

This tree riseth to the height of about fifteen feet, producing ever-green leaves in shape like the *laurus cerasus*, of a shining green: the flowers, which grow in clusters, are monopetalous, divided into five segments, and set singly on pedicles half an inch long; these flowers, when blown, appear white, but on a nearer view are of a faint blush-colour, which as the flowers decay grows paler. One of the five petals is longer and more concave than the rest, and is blended with yellow, green, and purple specks, being a viscous matter on the extremities of very fine hairs: the convex side of the same petal is also speckled with yellowish-green. The pointel rises from the centre of the flower, and has its head adorned with scarlet, and surrounded by ten stamina, whereof three are long and seven short, whose farina issues out at a small hole on its top. This elegant tree adorns the western and remote parts of Pennsylvania; always growing in the most sterl foil, or on the rocky declivities of hills, on river banks, and in shady moist places.

36. *Chamaedaphne semper virens foliis oblongis angustis, foliorum fasciculis oppositis è foliorum alis.*

The Ivy-tree.

The leaves of this plant are shaped like those of the fallow, or *salix folio rotundo*, and are ever-green, like the *chamaedaphne foliis tini*, to which it bears a near resemblance in the structure of its flowers, being monopetalous, with a stius and ten stamina, which grow in small clusters opposite to each other out of the ales of the upper leaves. The cup is also indented in the like curious manner, and of a bluish rose-colour.

It seems to be but of shrub growth, not rising above four or five feet high: this shrub is a native of Pennsylvania, and produced its blossoms at Peckham, in the garden of Mr. Collinson.

37. *Zanthoxylum spinosum.*

The Pellitory, or Tooth-ach-tree.

This tree seldom grows above a foot in thickness, and about sixteen feet high: the bark is white and very rough; the trunk and larger limbs are in a singular manner thick set with pyramidal shaped protuberances pointing from the tree; at the end of every one of which is a sharp thorn; these protuberances are of the same consistence with the bark of the tree and of various sizes, the largest being as big as walnuts: the smaller branches are beset with prickles only. The leaves are pinnated, standing on a rib six inches long, to which the lobes are set, one against another, with foot-stalks half an inch long; these lobes are awry, their greatest vein not running in the middle, whereby one side of the leaf becomes bigger than the other. From the ends of the branches shoot forth long stalks of small pentapetalous white flowers with reddish stamens: every flower is succeeded by four shining black seeds contained in a round green capsula. The leaves smell like those of the orange, and, as well as the seeds and bark, are aromatic, very hot, and astringent; and are used by the people inhabiting the sea-coasts of Virginia and Carolina for the tooth-ach, from whence it derives its name. These trees are not to be met with farther north than the southermost parts of Virginia, nor even there but only on the sea-coasts.

Hamelia angustifolia



36

Rhododendron maximum



35

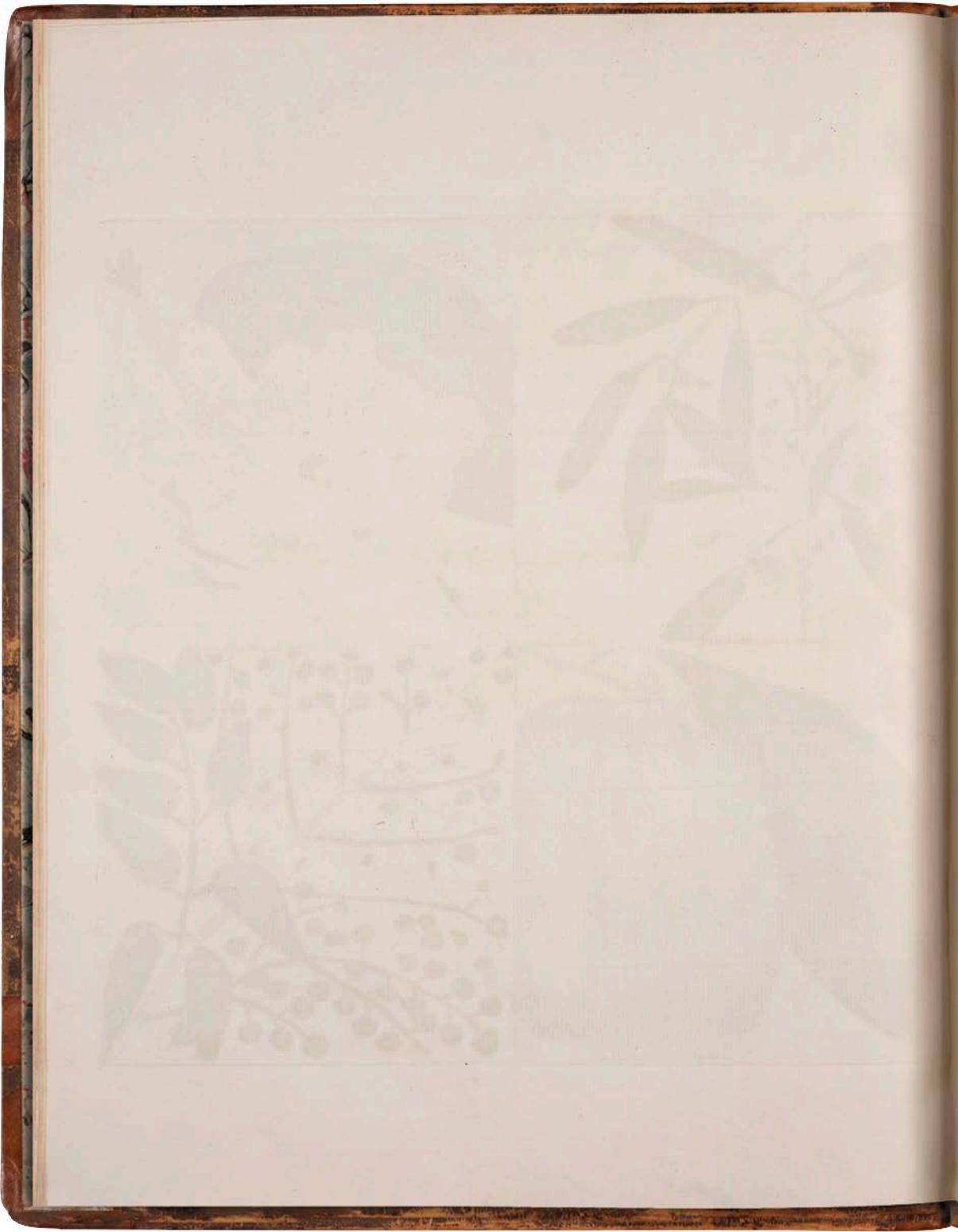


38

Annona



37



38. *Anona fructu lutescente, levi, scrotum arietis referente.*

The trunks of these trees are seldom bigger than the small of a man's leg, and are about ten or twelve feet high, having a smooth, greenish, brown bark. In March, when the leaves begin to sprout, its blossoms appear; consisting of six greenish, white, purple petals: the fruit grows in clusters, three and sometimes four together; they are at first green, but when ripe, yellow, and are covered with a thin, smooth skin, which contains a yellow pulp of a sweet, luscious taste; in the middle of which lay in two rows twelve seeds, divided by as many thin membranes. All parts of the tree have a rank, if not a fetid smell; nor is the fruit relished but by very few, except negroes. These trees grow usually in low shady swamps, and in a very fat soil. A full-grown fruit is about the size of a large cucumber. It produces its blossoms annually in the gardens of his Grace the Duke of ARGYLL.

39. *Frutex foliis oblongis acuminatis, floribus spicatis unoversu dispositis.*

The Sorrel-tree.

The trunk of this tree is usually five or six inches thick, and rises to the height of about twenty feet; having slender branches close-set with leaves shaped like those of the pear-tree: from the ends of the branches proceed little white monopetalous flowers, resembling those of the Arbutus, thick-set on short foot-stalks that grow on one side of many slender stalks, which hang down from one side only of the main branch.

40. *Pseudo-acacia hispida floribus roseis.*

The Acacia with rose-coloured flowers.

The flowers and leaves of this tree differ but little in shape from the *pseudo-acacia flore albo*; but the stalks and larger branches are thick-set with prickly hairs and with sharp spines placed alternately: the flowers are of a light rose-colour, which, added to the bright verdure of the leaves, renders it so beautiful that few trees make a more elegant appearance.

This rare tree has lately been procured by Sir JOHN COLLITON, Bart. from his plantation at Carolina, and flourishes annually in his gardens at Exmouth in Devonshire.

41. *Myrtus Brabantice similis Caroliniensis, baccata fructu racemofo sessili, monopyreno.*

The Candle-berry Myrtle.

These are but small trees, or shrubs, about twelve feet high, with crooked stems branching forth near the ground irregularly: the leaves are long, narrow, and sharp-pointed. Some trees have most of their leaves serrated, others not. In May, the small branches are alternately and thick set with oblong tufts of very small flowers, resembling in form and size the catkins of the hazel-tree, and coloured with red and green; these are succeeded by small clusters of blue berries, close connected like bunches of grapes: the kernel is inclosed in an oblong hard stone, incrusted over with an unctuous, mealy substance; which is what yields the wax whereof candles are made in the following manner:

In November and December, at which time the berries are ripe, it is customary for a man to remove with his family, from his own home, to some island or sand-bank near the sea where these trees most abound, taking with him kettles to boil the berries in; he builds a hut with palmeto leaves, for the shelter of himself and family while they stay, which is commonly three or four weeks.

The man cuts down the trees, while the children strip off the berries into a pottage-pot, and having put water to them, they are boiled till the oil floats, which is skimmed off into another vessel; and this is repeated till there rises no more oil: this when cold hardens to the consistence of wax, and is of a dirty-green colour; but they boil it again, and clarify it in bras kettles, which gives it a transparent greenness. These candles burn a long time, and yield a grateful smell; people usually add a fourth part of tallow, which makes them burn clearer.

There grows in Carolina another kind of this tree with broader leaves.

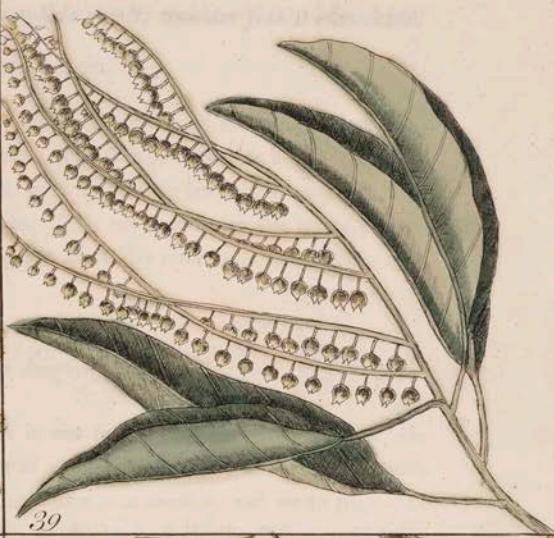
The wax with which these berries are covered is no small preservative to them in their passage from America: so that being fown thick in pans, and assisted by the moderate heat of a hot bed, they seldom fail of coming up thick: as their stems are very slender while young, great care is required in transplanting them, which should be close, that they may the better defend one another from the cold in winter, as well as from the scorching heat of the sun in summer. They are very hard when raised, and will endure our sharpest winters.

Robinia hispida

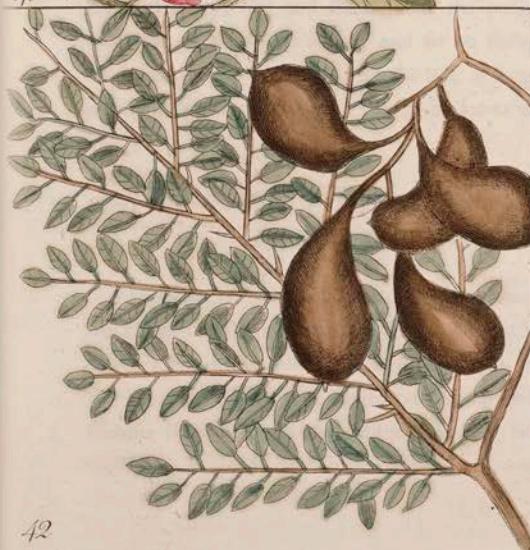


40

Adromeda arborea



39



42



41

Myrica cerifera



42. *Acacia, abruæ foliis, triacanthos capsula ovali, unicum semen claudente.*

The Water Acacia.

This tree spreads and grows to a large size: the leaves are winged and composed of many small, pointed lobes, like most others of its genus. The fruit is somewhat like a bean, contained in an oval capsula, fix of which commonly grow together in a bunch: many very large sharp thorns are set on its branches and larger limbs. This tree I never saw but at one place in Carolina, growing in shallow water, near the springs of Ashley river; and no doubt in other places.

43. *Frutex lauri longiore folio.*

This shrub is a native of Virginia, and grows in wet swamps and standing waters; it rises from the ground with many stems to the height of eight or ten feet, which are of a reddish colour. The leaves are placed alternately an inch from one another, and are in shape like those of a bay, stiff and shining; at the pedicles of the leaves grow the flowers, which are tubulous, of a pale red colour, and set on stalks three inches long; these flowers are succeeded by small conic seed-vessels about the size of large peas, that when ripe open in two parts, and display many small seeds. It retains its leaves all the winter.

44. *Frutex, padi foliis non serratis, floribus monopetalis albis, campani formibus, fructu crasso tetragono.*

The trunk of this shrub is slender; sometimes two or three stems rise from the same root to the height usually of ten feet. The leaves are in shape like those of a pear. In February and March come white flowers in form of a bell, hanging usually two and three together, from the sides of the branches, on foot-stalks an inch long: from the middle of the flower four stamens shoot forth, with a filius extending half an inch beyond them of a reddish colour; these flowers are succeeded by oblong quadrangular seed-vessels pointed at the ends.

45. *Arbor lauri folio, floribus ex foliorum, alis pentapetalis, pluribus staminibus donatis.*

The Root.

It has a slender stem, and grows usually about eight or ten feet high: its leaves are in shape like those of a pear, growing alternately on foot-stalks of an inch long; from between which proceed small whitish flowers, consisting of five petals; in the middle whereof shoot forth many small stamens headed with yellow apices. The roots of this plant are made use of in decoctions, and are esteemed stomachic, and a cleanser of the blood: the fruit I have not seen. It grows in moist shady woods in the lower parts of Carolina. It sends forth its blossoms in February; and is for its virtues, by way of eminence, called THE ROOT.

46. *Frutex foliis serratis, floribus longioribus spicatis subviridibus capsula pentagona.*

This shrub is usually slender in the main stem, spreading into many pliant branches, to the height of about ten feet: its leaves are set alternately, having the edges finely serrated: the flowers are tubulous, of a greenish-white, with a pointe reaching a little above the verge of the cup; these flowers are succeeded by round berries, which when ripe open, and divide into five sections, inclosing many small seeds. They grow in moist places in Carolina and Virginia.

47. *Bignonia urucu foliis, flore sordide albo, intus maculis purpureis & luteis asperso, siliqua longissima & angustissima.*

The Catalpa-tree.

This tree usually rises about twenty feet and spreads much; the bark is smooth, the wood soft and spongy, the leaves shaped like those of the lilac, but much larger, some being ten inches over, and of a bright green fatin hue. About the beginning of August it produces large bunches of tubulous white flowers, composed of one petal divided into four lips: the inside of every flower is powdered as it were with purple specks, through which run two parallel

Andromeda



45



46

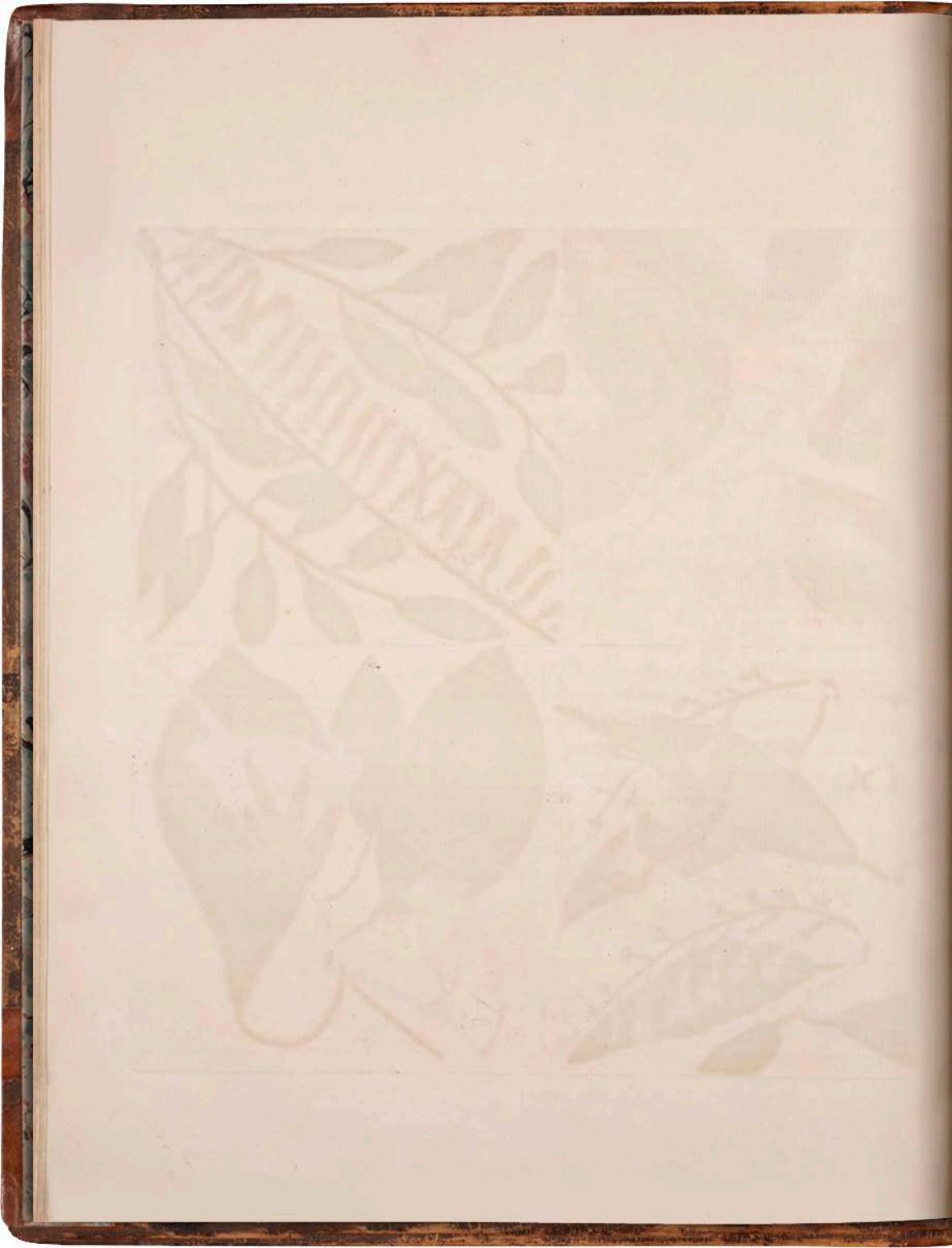


45



44

Kalesia tetrapteria



parallel chains of larger spots of a yellow colour, decreasing gradually to the center of the cup: the calix is bivalved, of a copper colour, and before it opens is shaped like a pear. The flowers are succeeded by pods twelve or fourteen inches long, which when ripe open, and display the seeds, which are winged, and lie over one another like the scales of fishes, or the seeds of an Apocynum. This tree was not known to the inhabitants of Carolina, till the seeds were brought there from the remoter parts of the country; and though the inhabitants are little curious in gardening, the uncommon beauty of this tree induced them to propagate it for the ornament of their plantations; it is since become naturalized to England; and did in August 1748 produce, at Mr. GRAY's, such numbers of blossoms, that the leaves were almost hid thereby. It delights in a rich moist soil, not exposed to winds; and will increase by seeds and cuttings.

48. *Bignonia Americana capreolis donata siliqua breviore.*

This plant usually grows on the shady banks of rivers, rising with many single pliant stems to the height of twenty and sometimes thirty feet, if supported by trees and shrubs growing near, on which it may climb and fasten its clasping tendrels. From the joints of the trailing stalks shoot forth their leaves, flowers, and tendrels; four leaves grow at every joint, placed by pairs on two horizontal short stalks: the flowers are set on foot-stalks of above an inch in length; are monopetalous, and divided into five sections, which reflect back, and are of a bright yellow within, but the outside of the flower is of a cinnamon colour, and has within it four stamina with a stylus. The seeds are winged, and fixed to a placenta within a pod. This beautiful plant is a native of both Virginia and Carolina, and blows there in May; though in England it blossoms not before August. These seeds should be brought over in their pods, and being at their arrival sown in a hot bed, moderately warm, will not lay long before they appear above ground; they require some care and protection till they have passed the second winter, but are able afterwards to abide our open air.

49. *Bignonia fraxini foliis, coccineo flore minore.*

The Trumpet-flower.

These plants climb trees, on which they run a great height, and are frequently seen to cover even the dead trunks of very tall trees: the leaves are winged, consisting of many serrated lobes standing by couples opposite to each other, on one rib. In May, June, July, and August, they produce bunches of red flowers, somewhat like the fox-glove; each flower shoots from a reddish-coloured calix, is monopetalous, swells in the middle, and opens at the top into five lips, with a pointe arising from the calix through the middle of the flower. In August the pods or seed-vessels appear; they are, when full-grown, eight or nine inches long, about the size of a man's thumb, and somewhat tapering at both ends; and divide from end to end in two equal parts, displaying many flat winged seeds.

These seeds should be sent to England in their pods, and will grow very readily when sown in pots, with the moderate heat of a hot bed; the succeeding winter a continuance of protection is necessary, but in the spring they may be planted out in a warm situation, where they will abide the rigour of our sharpest winters; and their trailing branches being supported, they will produce plenty of their beautiful blossoms.

There are two kinds of this plant, which are so like each other that they seem to differ only in size. This here described is the larger one.

50. *Chamedaphne foliis tini, floribus bullatis umbellatis.*

The Ivy-tree of Virginia.

This ever-green shrub rises usually to the height of five or six feet, and sometimes to twice that height: the stems of some are as big as a man's wrist, though generally smaller, and covered with a rough brown bark: the wood is very close-grained, heavy, and hard like box; the limbs most commonly are crooked and grow irregular, but are thick cloathed with stiff smooth leaves of a shining green. The flowers grow in bunches on the tops of the branches, to foot-stalks three inches long; they are white, stained with a purple red, and consist of one leaf in form of a cup, divided at the verge into five sections; in the middle is a stilus and ten stamina, which, when the flower first opens, appear lying close to the sides of the cup at equal distances, their apices being lodged in ten little hollow cells, which being prominent on the outside appear as so many little tubercles.

Hulnia latifolia



50

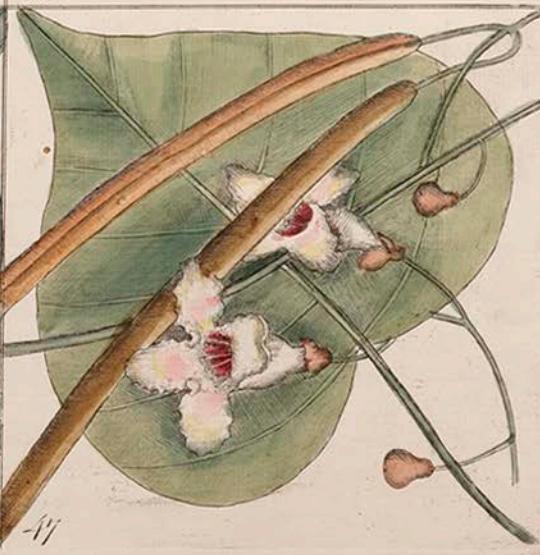


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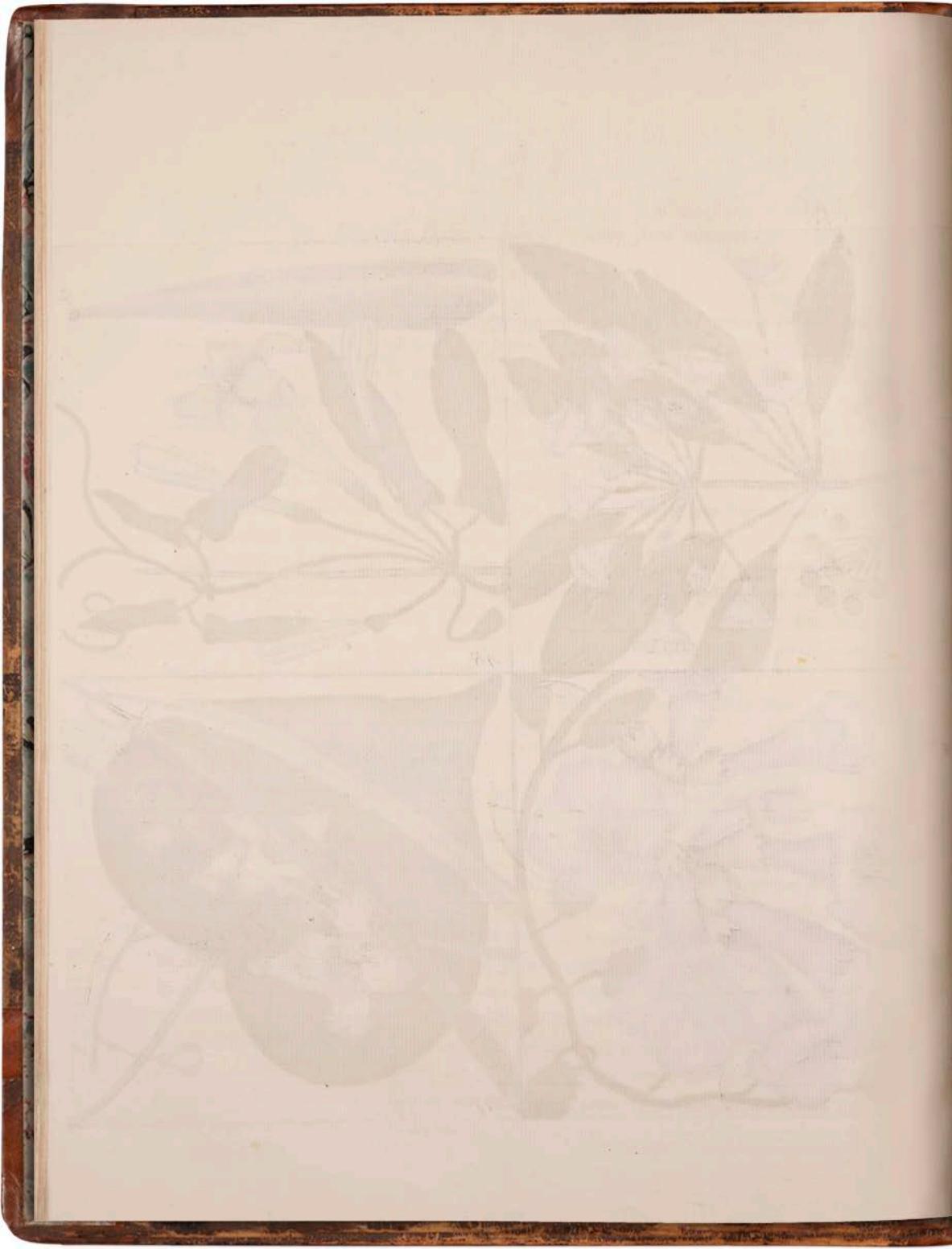
49

Bignonia radicans



51

Bignonia catalpa



The flowers are succeeded by small round capsulæ, which, when ripe, open in five parts and discharge their small dust-like seeds.

This plant is a native of Carolina, Virginia, and other parts of the northern continent of America.. They usually grow on rocks hanging over rivulets and running streams, and on the sides of barren hills, in a soil the most sterl and least productive I ever saw. Sheep are poisoned by browsing on its leaves; though deer feed on them without harm.

As all plants have their peculiar beauties, it would seem presumptuous to assign to any one an elegance beyond all others; yet, considering the curious structure of the flower and the beautiful appearance of this whole shrub, I know of none that has a better claim to be styled the most elegant.

After several unsuccessful attempts to propagate it from seeds, I procured plants of it at several times from America, but with little better success, for they always dwindled, and produced no blossoms; at length I procured some plants of it from Pennsylvania, which climate being nearer to that of England than that from which mine came, some bunches of blossoms were produced in July 1740 and 1741, at Fulham, and also in the garden of Mr. COLLINSON at Peckham.

51. *Alcea Floridana, quinque capsularis laurinis foliis, leviter crenatis, seminibus coniferarum instar alatis.*

The Loblolly Bay.

This is a tall and very straight tree, with a regular pyramidal-shaped head: its leaves in figure are like those of the common bay-tree, but serrated, and of a most delightful shining green. It begins to produce white blossoms in May, and continues bringing forth its flowers the greater part of the summer: the flowers are fixed to foot-stalks four or five inches long, are monopetalous, divided into five segments, encompassing a tuft of stamens headed by yellow apices; these flowers in November are succeeded by a conic capsula having a divided calix; the capsula when ripe opens, and divides into five sections, disclosing many small half-winged seeds.

This tree retains its leaves all the year: it grows in very wet places only, and frequently two feet deep in water; the wood is somewhat soft, yet I have seen some beautiful tables made of it. It grows in Carolina, but in none of the more northern colonies.

52. *Guajacana.*

The Perfimmon-tree.

These trees grow from twenty to thirty feet in height, with a trunk about ten or twelve inches thick, and bear leaves like those of the pear-tree: the blossoms appear in April, growing along the sides of the branches on very short foot-stalks; they are monopetalous, succulent, and of a green colour; divided into four segments, in the middle of which stands the ovary, which when grown to its full bigness is of the size and shape of a large Orleans plum: as the fruit swells, the four petals which composed the flower spread and become hard and dry. The fruit, which is of a transparent yellow colour, incloseth four flat stones: the fruit of some of these trees ripen at different times from others; some in August, others in November, and will hang after the leaves fall even till December, when having lost much of its watery parts, it grows shrivelled, candied, and very luscious, resembling raisins of the sun; and if skilfully managed, would probably afford a fine rich spirit. Great plenty of these trees grow in Carolina, Virginia, and most of our northern colonies in America; where their fruit is a seasonable support to birds, squirrels, and other animals. The stone split in two parts exhibits the tree in embryo, with the two seed leaves, and its stem or trunk, in a more distinct manner than in any I have ever met with. These seeds will rise in the natural ground; but the more expeditious and certain method is, to raise them with the assistance of a moderate hot bed.

53. *Frutex aquaticus, floribus luteis, fructu rotundo quinque capsulari.*

The height of this plant is usually about twelve feet; it rises with many small stems, from which shoot forth smaller twigs set with small pointed smooth leaves. The flowers grow on the tops of the branches; before they open are inclosed in small brown perianthia set on short foot-stalks; are hexapetalous, and of a deep yellow colour.

They grow in plashes and fresh-water ponds, in the woods of Virginia and Carolina; and in the beginning of February adorn the woods, when few other plants appear in blossom. The flowers are succeeded by small round capsuleæ, which in March and April divide into four parts and disclose their seeds, which being very small, are dispersed by the wind; and when carried into watery places, they spring up very thick, and blossom in a short time.

Diospyros



52

Gordonia Lasianthus



51



54



53

Philadelphus inodorus

56. *Jasminum luteum odoratum Virginianum, scandens, semper virens.*

The Yellow Jessamin.

This plant grows usually in moist places; its branches being supported by other trees and shrubs, on which it climbs. The leaves grow opposite to each other from the joints of the stalks, whence likewise shoot forth yellow tubulous flowers, the verges whereof are notched or divided into five sections. The seeds are flat and half-winged, containing an oblong pointed capsula which, when they are ripe, splits up to the stalk, and discharges them.

The flowers smell like those of the wall-flower, and diffuse their smell to a great distance. These plants are scarce in Virginia, but are plentiful in Carolina.

57. *Hamamelis.*

The usual height of this plant is ten or twelve feet: they appear like nut-trees at a little distance; their leaves resembling those of the nut, or rather those of the alder-tree. The flower is a pale yellow, consisting of a triangular involucrum, and a calix divided by four segments, from which proceed four slender petals about two inches long: it has also four stamens and a stilius hardly to be discerned with the naked eye. It flowers at Carolina in October, and after continuing long in blossom, sets its fruit for the next summer. The seed-vessel consists of a double capsula, which when ripe splits half open, and discloses two hard black shining seeds, having a white spot at their bigger ends; each seed lies in its distinct cell, separated by a thin membrane, and they are sometimes tricapsular.

A plant of this kind was first sent me from Virginia in the year 1743; it arrived at Christmas, and was then full of blossoms, as it has annually been about the same time ever since: it is a hardy shrub, and is proof against the severest cold. The seeds may be raised in the open ground, but will lay two winters therein before they appear; and are long before they strike root by laying.

Bignonia sempervirens



56

Azalea



55

Polycaulus florida



58

Hamamelis virginica



57



58. *Frutex corni foliis conjugatis; floribus instar anemones stellatae, petalis crassis, rigidis, colore sordide rubente; cortice aromatico.*

This shrub grows about ten or twelve feet high; the leaves are set opposite to each other; the flowers resemble in form those of the star-anemony, composed of many stiff copper-coloured petals, inclosing a tuft of short yellow stamens. The fruit of this plant appeared as is here represented; but being unripe when discovered, no more could be known of it: the bark is very aromatic. These trees grow in the remote and hilly parts of Carolina in springs of rivers. It is a very hardy plant, and yields a succession of flowers the greater part of the summer. This plant may be increased by layers,

*59. The Chestnut-tree,

The chestnut-trees in America are in appearance so very like those of Europe, that little or no difference can be discerned between them, except that the trees and nuts of the American chestnuts are neither so large and fair as those of Europe, but the nuts are much sweeter. They abound most in the hilly parts of the country, particularly on the Appalachian mountains, where they are more numerous than any other kind of tree.

*60. *Platanus Occidentalis.*

The Western Plane-tree,

This tree is become a denizen of England, and in some soils propagates its offspring by seeds and suckers, as our ashes and elms do: they grow to be lofty and stately trees; their leaves are very broad, of a pleasant green, and have a white down on their back sides. The seed-vessels are globular, hanging single and pendent: the trunks are large; the bark smooth, glossy, and so variegated with white, green, &c. that they produce a fine effect among the other trees,

*61. *Populus nigra folio maximo, gemmis balsamum odoratissimum fundentibus.*

The Poplar of Carolina.

This tree is seldom found but near rivers, above the inhabited parts of the country: it grows very large and of a great height. Its leaves are large, smooth on one side, and serrated, or rather edged with small indentures; and in shape resemble those of the black poplar which PARKINSON describes. The foot-stalks are long, remarkably flat, and of a reddish colour, as are the larger veins of the leaves. In April, at which time only I saw them, they had shed their seeds; but by what remained I could perceive that they hang in clusters, and are covered with an odoriferous balsam, which issues out of and sticks to the large swelling buds of this tree. It is the quickest grower of any tree I know, and is easily multiplied by cuttings.

*62. *Fraxinus Carolinensis, foliis angustioribus utrinque acuminatis, pendulis.*

These trees are commonly of a mean height, and the leaves are pointed at both ends: the seeds are winged, and hang in clusters. They grow in low moist places.

*63. *Acer Virginianum folio majore subtus supra viridi splendente.*

The Red flowering Maple.

These trees grow to a considerable height; but their trunks are seldom very large. In February, before the leaves appear, its little red blossoms open; and continues in flower about three weeks, and are then succeeded by the keys, which are also red, and with the flowers continue six weeks; adorning the woods earlier than most other trees in Carolina and Virginia. They endure the air of our English climate as well as their native one.

The seeds of this tree being succulent, retain their growing faculty but a short time; therefore, as the trees that are already in England do not produce perfect seeds, there is no other way of increasing them but by laying, or possibly by inarching on our native maple.

*64. *Acer Americanum, &c.*

The American flowering Maple, with larger bunches of flowers.

*65. *Acer*

*65. *Acer Maximum*, *foliis trifidis vel quinquefidis, Virginianum.*

The Ash-leaved Maple.

*66. *Acer Carolinianum*, *foliis maximis subtus argenteis in lacinias profundiores & magis acuminatis divisis.*

The leaves of this maple are as large as those of the *platanus occidentalis*.

*67. *Carpinus, Virginiana florescens.*

The flowering Horn-beam.

*68. *Acacia Americana abruæ foliis, triacanthos capsulâ ovali unicum semen claudente.*

The Large thorned Acacia.

This tree bears a spreading head, and when full grown is of a great thickness: the trunk and bigger branches are set with many large, long, sharp thorns, three of which stand generally together. The seeds are a kind of bean, contained in a flat pod above a foot in length, and three inches broad, replete with a sweet pulp of a honey-like consistence. The inhabitants brew a palatable and wholesome liquor thereof; and it is not improbable, that the immense quantities of such rich mellifluous juice to be procured from these trees may hereafter be made use of for many valuable purposes. These trees were unknown in Virginia till about the year 1700, near which time some of them were brought from the banks of the Mississippi river by the Cherokee Indians, and planted in their nation, distant from Virginia six or seven hundred miles; from whence they were introduced to Virginia by the Indian traders of that country.

The only valuable part of this tree is the fruit; the wood being good for little. In Virginia it is called the Honey Locust.

It is raised from seeds only, which should be brought over in their pods.

*69. *Pseudo-acacia*.

The Locust-tree of Virginia.

The wood of this tree is esteemed in Virginia, on account of its durableness, beyond that of any other. When the English first settled in that country, being obliged to run up with all the expedition possible such little houses as might serve them to dwell in, till they could find leisure to build larger and more convenient ones, they erected each of their little hovels on four only of these trees, pitched into the ground to support the four corners: many of these posts are yet standing, and not only the parts under ground, but likewise those above, still perfectly sound. - This is a beautiful and very useful tree, yielding to none in the pleasing verdure of its leaves: of the wood of this tree the Virginian and other northern American Indians made their bows, it being when old very tough and pliant; yet the limbs and branches are brittle and liable to be split by winds, therefore not so fit to be planted in open exposures. It bears white papilionaceous flowers that hang in clusters, and perfume the air with their fragrance. The seeds remain hanging on the leafless trees till after Christmas; and from them a succession may easily be raised.

This tree is hardy, and is never affected by our frosts: they are very numerous in most of our northern colonies, and of quick growth. Its usefulness and easy culture recommends it for parks and fields, as well as avenues in gardens.

70. *Cerasi similis, arbuscula Mariana pædi folio, flore albo parvo racemoſo*.

The clustered Black Cherry.

In the thick woods of Virginia and Carolina, where these trees most abound, they seldom grow bigger than a man's leg; but being removed to more open places, they become large trees; some of them being two feet in diameter with a single straight stem. In March they produce pendulous bunches of white flowers, which are succeeded by small cherries of a greenish cast, hanging in clusters of six inches long in the manner of currants: the fruit of some of these trees are sweet and pleasant-tasted, others are bitter: they are approved for making the best cherry-brandy of any other; and also for stocks to graft other cherries upon. The wood has a fine grain, and is esteemed for its uses in joinery and wainscoting. They are raised principally from their seeds, but will take root by laying.

Stelaea trifoliata



82



70



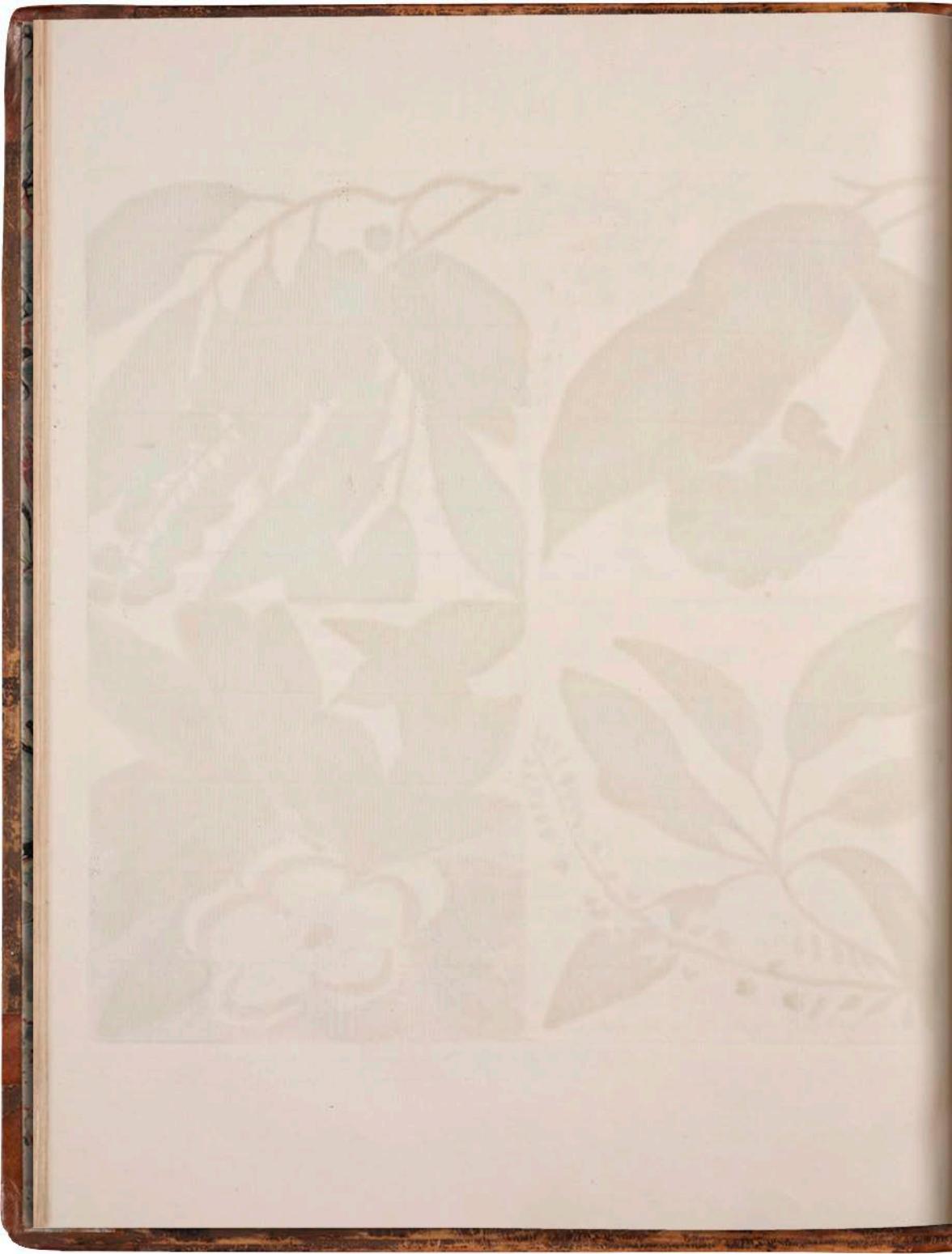
81



83

Clethra alnifolia

Stewartia Malacodendron



*71. *Aquifolium Virginianum.*

The Holly of America.

There appears no specific difference between the common American and the common English Holly; the leaves of the American being more or less prickly, and some wholly without; and the berries somewhat less, and of a brighter red; but they differ most in stature: those of America, particularly in the upper parts of Virginia, are frequently forty and sometimes fifty feet high; the trunk fourteen and eighteen inches diameter, and very erect.

*72. *Juniperus Virginiana.*

The Cedar of North America.

These trees are natives of the maritime parts of North America from the cape of Florida to the latitude of between forty and fifty degrees; which extensive tract for above a century past has afforded a sufficient supply of this wood for building infinite numbers of ships and sloops, yet there still remain inexhaustible quantities fit for the same purpose; for being of a quick growth they become good timber in twenty years. The inhabitants of Bermudas first became famous for their cedar vessels, and long retained the reputation of building them to such a degree, that in England cedar sloops and Bermudas sloops were synonymous terms; and most people supposed that all the cedar vessels in America were built at Bermudas; whereas that whole island contains not the hundredth part of the quantity of land that affords cedar, and consequently the number of ships built on that little island is inconsiderable in comparison to what the continent, the Bahama, and other islands furnish. It is true, the wood of the Bermudas cedar is preferred to that of the continent; for as rocky soils produce the firmest wood, the cedars of Bermudas receiving their nourishment from solid rocks, acquire a closeness and solidity in the grain beyond what those have which grow in the sandy loose soil on the continent: however the different appearance of cedars (which is often caused by different soils or seminal varieties) is no sufficient reason for supposing so many different species; for in America I have frequently gathered specimens from a grove of these trees, and even from a single tree, that have agreed with all the different characters by which they have been distinguished in England. I was told by a person of probity and curiosity, that he carried some berries

berries of the Bermudas cedar from thence, and raised trees from them in Carolina, where the trees became more like in appearance to the Carolina cedar trees than to those of Bermudas; therefore it is not to be wondered that such-like changes appear in England, where the soil and climate differ vastly from those parts of America where cedars grow.

The seeds of this tree may be raised in the common earth, giving them some protection in the winter if it should be sharp; though better success may be expected if sown in a hot bed, particularly those from Bermudas and the more southern parts of the continent.

*73. *Cupressus Americana, fructu minimo.*

The American Cypres. White Cedar.

Sow the seeds of this tree in the spring in boxes or pans of earth, for the convenience of removing them to a warm aspect when the rigour of the weather requires it, keeping them moderately moist till the next spring; then give them the gentle heat of a hot bed, and at their appearing above ground give them frequent waterings, and harden them gradually against the approach of winter: if the cold should prove excessive, give them some small protection, and in the spring plant them out with as much mould sticking to their roots as can be. Except the *Diffideus American cypres*, this is the only species of cypres that has been found in North America: it retains the leaves the year round. These trees grow in Carolina, Virginia, Maryland, and Pennsylvania, and only in the upper parts of those countries; and is accounted excellent timber: they grow to large and lofty trees.

*74. *Siliquastrum Americanum.*

The Red Bud-tree.

The principal difference between this and the *Arbor Judæ* of Europe is, that the leaf of this is sharper-pointed, and the plant less capable of enduring cold than that of Europe.

*75. *Rhus*

*75. *Rhus glabrum panicula speciosa coccinea.*

This plant rises to the height of six or seven feet, with one and sometimes several straight stems from one root, and produces spikes of pentapetalous white flowers at the ends of the branches. That which distinguishes this and gives it the preference to all the other species of it is, the resplendence of its scarlet panicles, the colour of which begins to appear in July with a tincture of yellow; but as the fruit ripens the scarlet heightens. The berries that compose the panicles are yellow, thick-set with numerous filaments or small threads of a purple or scarlet colour, which nothing can excel, especially when the sun shines upon it.

N. B. A warm summer is requisite to perfect its colour in our climate. They will rise from seeds, but are more easily increased by suckers, which they are much inclined to produce.

*76. *Pavia.*

The Scarlet flowering Horse-chesnut.

This tree grows usually but to a small size.

*77. *Mespilus spinosa.*

The Cockspur Thorn.

This tree grows usually to the height of sixteen feet or more, with a straight stem and regular-shaped head. In the spring it produces large clusters of flowers, which in October are succeeded by bunches of a red fruit of the size and form of those of the Italian Azerol.

It is very proper to plant in parks, as well for its handsome appearance as the benefit it affords the deer, which delight to browse on the fruit. It is a hardy plant, and may be raised from seeds with as much facility as the common hawthorn, and deserves to be propagated preferable to others of this genus.

There are a great many different species of the *Mespili* that have been introduced from North America; a great variety of which is to be seen in the gardens of Mr. GRAY at Fulham. The different colour of their haws, and their other various appearances, adapt them to the use of groves and wildernes: and as they are to be obtained here without procuring them from America, that trouble may be omitted.

*78. *Periclymenum Virginianum.*

The Scarlet Honey-suckle.

This is a climbing plant, and retains its leaves all the winter: the flowers are tubulous and of a scarlet colour. They are natives of Carolina, though they will endure our climate in a warm situation. If they like their soil (in which they are very difficult) they produce such a profusion of flowers, that no wall-tree makes so splendid an appearance. They are easily increased by laying; but being somewhat tenderer than the European kinds, they require a little more indulgence till the first year after planting has passed.

*79. *Phaseoloides, Caroliniana, frutescens, scandens, foliis pinnatis, floribus cæruleis spicatis.*

The Kidney Bean-tree.

This plant was introduced from Virginia, where, and in Carolina, its trailing branches are supported by trees and shrubs. In May and June it produces bunches of papilionaceous purple flowers, which are succeeded by pods containing beans of a brown colour, of the size, or rather less than horse-beans, which will sometimes ripen in England: they likewise in some soils afford plenty of suckers by which they may be propagated.

*80. *Arbor Virginiana citria vel limoniæ folio, Benzoinum fundens.*

The Benjamin-tree.

This is a small tree, or rather shrub; the leaves and bark aromatic: the small yellow flowers which are produced in the spring, are succeeded by small oval berries of a scarlet colour, which when bruised emit a fragrant smell. It is called in Virginia the All-spice-tree.

81. *Alni folia Americana serrata, floribus pentapetalis albis, in spicam dispositis.*

This shrub grows in moist places, and sometimes in water, from which it rises with many slender stems to the height of ten or fourteen feet: the leaves are somewhat rough, placed alternately, serrated, and in shape not unlike those of the white thorn. In July, there shoots from the ends of the branches spikes of white flowers four or five inches long; each flower consists of five petals and a tuft of small stamens. The flowers are thick-set on foot-stalks a quarter of an inch long, and are succeeded by small, oval, pointed capsules, containing many chaffy seeds. It endures the greatest cold of our winters; increases by laying, and sometimes produces suckers.

82. *Frutex Virginianus trifolius ulmi samaris.*

This tree usually grows to the height of twelve or fourteen feet, with a trunk as big as one's leg, having a greenish smooth bark. Its leaves are trifoliate, and set on long foot-stalks; the flowers grow in spiked bunches, many of them together, each flower having four white petals, and are succeeded by clusters of seeds hanging separately by short pedicles, and covered with flat thin capsules. They may be increased by laying, but are long in striking root.

83. *Steuartia.*

This shrub rises from the ground with several stiff inflexible stems to an ordinary height: the leaves are serrated and grow alternately, resembling those of the Syringa. The flower resembles that of a single rose, consisting of five white concave petals, with a point rising from a pale green ovary, surrounded by many purple stamens with bluish apices. It is remarkable, that one particular petal in every flower is stained with a faint greenish yellow. The calyx is divided into five segments; the capsule has a hairy roughness on the outside, is of a conic form, and when ripe splits open, and discloses five membranous shells, every one of which contains a single oblong brown shining seed. I received a plant of it from Virginia in full blossom. The wood is so very hard, that it seems to be not increasable by laying.

84. *Palma Brasiliensis prunifera folio plicatili seu flabelli forma caudice squammatu.*

The Palmetto-tree of Carolina.

This is the only species of that numerous and useful genus of trees the Palm, that is found to grow without the tropics: I observed it as far north as the latitude of thirty-four degrees, which being within the climate from whence our American hardy trees have been introduced, I conceive it not improbable that this tree, by a little protection, may be brought to endure our climate and adorn our gardens with its ample foliage: its vicinity with many hardy trees which now are naturalized to England, would induce one to conclude that this tree also, as well as those, may be able to bear the cold of our country; but as all American trees of the same latitude are not equally hardy, trial only can determine how far this tree is capable of abiding the open air of our climate. Was the singular and specious appearance of these trees known to the Curious, there would need no other excitement to the desire of procuring them, which with no great difficulty may be effected from Charles Town in South Carolina; within four miles of which is a little island, six miles in circuit, called Sullivan's Island, abounding with Palmetto-trees of all dimensions. The roots of these trees growing within a small compass, and their fibres being closely connected, small trees may be taken up with sufficient earth adhering to their roots, put singly in tubs of earth, and supported by a stake or stakes.

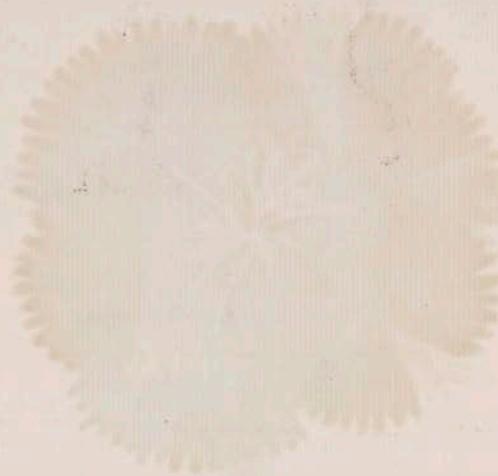
The leaves are more than semicircular; and some of them so broad, that they measure six feet diameter. These trees are found in Carolina from ten to fifty feet in height. This, as well as the other kinds of Palms, has its peculiar uses; particularly its leaves are used for the walls and coverings of houses; making hats, baskets, ropes, with many other utensils. The berries are globular, as big as cherries, of a luscious sweet taste; and is a great part of the food of the maritime Indians.

Sir HANS SLOANE observes, that the name of Palm seems best to agree with this kind, because the leaf resembles a hand more than any of the other sorts.



87

Borassus flabellifer



*85. *Celtis.*

The Lote, or Nettle-tree of America.

These trees are natives of Carolina and most of the northern colonies in America, and are hardy enough to endure the climate of England; they grow to a large size, of a regular pyramidal form; the wood close-grained, and fit for many mechanical uses. The leaves are sharp-pointed and notched; the flowers are composed of five very small white petals, encompassing many stamens, and are succeeded by single round berries, which, if sown in a hot bed, will sometimes rise in three or four months, but in the common earth are usually the second year before they appear. These trees naturally grow in a moist soil, and while young require frequent watering: their branches also will strike root by laying; and though it is a tree of no singular beauty, it may serve to add to the variety of the forest-trees which the new world affords.

F I N I S.

